TABLE 1.A

EXAMPLE NUMBER	ELECTRODE MATERIAL	METALLIC OXIDE ON ELECTRODE	COMPOSITION OF DIELECTRIC GLASS LAYER (% BY WEIGHT)					DIELECTRIC CONSTANT ε	THICKNESS OF GLASS	THE NUMBER OF PANELS CAUSING WITH STAND VOLTAGE FAILURE IN 20 PANELS AFTER AGING ON 150V AND 30 KHZ	PANEL BRIGHTNESS cd/m²
			PbO	B_2O_3	SiO_2	Al_2O_3	TiO_2				
1	Ag	CVD METHOD ZnO(0.5 μm)	78	11	10	1	0	10	13 μm	0	515
2	Ag	CVD METHOD ZrO_2(0.1 μm)	65	19	12	3	0	11	14 μm	0	512
3	Ag	CVD METHOD MgO(0.2 μm)	73	10	5	2	10	20	13 μm	0	516
4	Ag	CVD METHOD TiO_2(0.5 μm)	74	10	5	10	5	13	13 μm	0	513
5	Ag	CVD METHOD SiO_2(2.0 μm)	74	10	5	10	5	13	5 μm	0	526
6	Ag	CVD METHOD Al_2O_3(1.5 μm)	74	10	5	10	5	13	8 μm	0	520
8	Ag	CVD METHOD Cr_2O_3(1.0 μm)	74	10	5	10	5	13	10 μm	0	520
9	Cr-Cu-Cr	CVD METHOD SiO_2(5.0 μm)	0	0	10	0	0	—	0 μm	1	535
10	Cr-Cu-Cr	CVD METHOD Al_2O_3(3.0 μm)	0	0	10	0	0	—	0 μm	1	540
11	Cr-Cu-Cr	CVD METHOD ZnO(6 μm)	0	0	10	0	0	—	0 μm	1	530
12	Ag	CVD METHOD Al_2O_3(0.1 μm) SiO_2(0.3 μm)	74	10	5	10	5	13	12 μm	0	520
13	Ag	NO METALLIC OXIDE	74	10	5	10	5	13	20 μm	10	475

TABLE 1.B

EXAMPLE NUMBER	ELECTRODE MATERIAL	METALLIC OXIDE ON ELECTRODE	COMPOSITION OF DIELECTRIC GLASS LAYER (% BY WEIGHT)						DIELECTRIC CONSTANT ε	THICKNESS OF GLASS	THE NUMBER OF PANELS CAUSING WITH STAND VOLTAGE FAILURE IN 20 PANELS AFTER AGING ON 150V AND 30 KHZ	PANEL BRIGHTINESS cd/m²
			PbO	B_2O_3	SiO_2	Al_2O_3	TiO_2					
14	Ag	CVD METHOD ZnO(0.1 μm)	45	23	22	5	5	0	12	14 μm	0	510
15	Ag	CVD METHOD ZrO_2(0.3 μm)	45	20	20	5	5	5	18	13 μm	0	512
16	Ag	CVD METHOD MgO(0.5 μm)	30	37	10	3	10	10	24	13 μm	0	513
17	Ag	CVD METHOD TiO_2(1.0 μm)	40	25	23	2	3	7	20	12 μm	0	515
18	Ag	CVD METHOD SiO_2(1.0 μm)	〃	〃	〃	〃	〃	〃	〃	11 μm	0	515
19	Ag	CVD METHOD Al_2O_3(0.5 μm)	〃	〃	〃	〃	〃	〃	〃	12 μm	0	514
20	Ag	CVD METHOD Cr_2O_3(0.3 μm)	〃	〃	〃	〃	〃	〃	〃	12 μm	0	514
21	Cr-Cu-Cr	CVD METHOD ZnO(6 μm)	0	0	0	0	0	0	—	0	1	520
22	Cr-Cu-Cr	CVD METHOD Cr_2O_3(5 μm)	0	0	0	0	0	0	—	0	2	519
23	Ag	CVD METHOD SiO_2(0.3 μm) TiO_2(0.2 μm)	40	25	23	2	3	7	20	10 μm	0	520
24*	Ag	NO METALLIC OXIDE	40	25	23	2	3	7	20	15 μm	8	480

* EXAMPLE NUMBER 13 AND 24 FOR COMPARISON

TABLE 2

EXAMPLE NUMBER	GLASS SUBSTRATE											THICKNESS OF GLASS SUBSTRATE (mm)
	PRODUCT NAME	MANUFACTURER	DISTORTION POINT (°C)	SPECIFIC GRAVITY OF GLASS (g/cm^3)	THEMAL EXPANSION COFFICIENT ($\times 10^{-1}$/C)	COMPOSITION OF GLASS (% BY WEIGHT) *RO(MgO,CaO,SrO,BaO) **R2O(Na2O,K2O)						
						SiO_2	Al_2O_3	B_2O_3	RO* (ALKALINE EARTH)	R_2O* (ALKALI)		
25	OA-2	NIHON ELECTRIC GLASS CO.	650	2.73	47	56	15	2	27	0		1.0
26	OA-2	NIHON ELECTRIC GLASS CO.	650	2.73	47	56	15	2	27	0		0.7
27	BLC	NIHON ELECTRIC GLASS CO.	535	2.36	51	72	5	9	7.5	6.5		1.5
28	BLC	NIHON ELECTRIC GLASS CO.	535	2.36	51	72	5	9	7.5	6.5		1.0
29	NA45	NH TECHNO GLASS CO.	610	2.78	46	49	11	15	25	0		1.0
30	NA45	NH TECHNO GLASS CO.	610	2.78	46	49	11	15	25	0		0.5
31	NA-35	NH TECHNO GLASS CO.	650	2.50	39	56	15	2	27	0		1.5
32	NA-35	NH TECHNO GLASS CO.	650	2.50	39	56	15	2	27	0		0.1
33*	SODA LIME GLASS(AS)	ASAHI GLASS CO.	511	2.49	85	72.5	2	0	12	13.5		2.7
34*	SODA LIME GLASS(AS)	ASAHI GLASS CO.	511		85	72.5	2	0	12	13.5		1.5
35*	PD-200	ASAHI GLASS CO.	570	2.77	84	58	7	0	21	14		2.7
36*	PD-200	ASAHI GLASS CO.	570	2.77	84	58	7	0	21	14		1.5

* EXAMPLE NUMBER 9-12 FOR COMPARISON

TABLE 3

EXAMPLE NUMBER	DIELECTRIC LAYER			PROTECTING LAYER (FORMING METHOD AND FACE ORIENTATION)	PARTITION WALL (FORMING METHOD AND MATERIAL)	PANEL WEIGHT (WITHOUT CIRCUIT)	PANEL STATE DURING OPERATION	CHANGING RATE OF PANEL BRIGHTNESS AFTER OPERATION ON 200V FOR 5000H (%)
	FORMING METHOD	COMPOSITION OF DIELECTRIC LAYER (% BY WEIGHT)	THERMAL EXPANSION COEFFICIENT ($\times 10^{-7}$/℃)					
25	THERMAL SPRAYING METHOD	$PbO(30), B_2O_3(20)$ $SiO_2(45), Al_2O_3(5)$	45	THERMAL CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD Al_2O_3(ALUMINA)	3.0kg	NO CRACK IN DIELECTRIC GLASS	-2.9
26	THERMAL CVD METHOD	Al_2O_3	70	THERMAL CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD Al_2O_3(ALUMINA)	2.1kg	NO CRACK IN DIELECTRIC GLASS	-2.5
27	THERMAL SPRAYING METHOD	$P_2O_5(45), ZnO(34)$ $Al_2O_3(18), CaO(3)$	50	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	3.9kg	NO CRACK IN DIELECTRIC GLASS	-2.8
28	PLASMA CVD METHOD	$3Al_2O_3 \cdot 2SiO_2$	50	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	2.6kg	NO CRACK IN DIELECTRIC GLASS	-2.7
29	THERMAL SPRAYING METHOD	$PbO(30), B_2O_3(20)$ $SiO_2(45), Al_2O_3(5)$	45	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	3.1kg	NO CRACK IN DIELECTRIC GLASS	-2.7
30	THERMAL SPRAYING METHOD	$P_2O_5(45), ZnO(34)$ $Al_2O_3(18), CaO(3)$	50	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	1.54kg	NO CRACK IN DIELECTRIC GLASS	-2.6
31	PLASMA CVD METHOD	SiO_2	30	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	4.1kg	NO CRACK IN DIELECTRIC GLASS	-2.9
32	PLASMA CVD METHOD	SiO_2	30	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	0.28kg	NO CRACK IN DIELECTRIC GLASS	-3.0
33*	THERMAL SPRAYING METHOD	$PbO(30), B_2O_3(20)$ $SiO_2(45), Al_2O_3(5)$	45	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	7.4kg	CRACK IN DIELECTRIC SUBSTANCE	CRACK IN PANEL
34*	PLASMA CVD METHOD	Al_2O_3	70	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	4.1kg	CRACK IN PANEL	—
35*	THERMAL SPRAYING METHOD	$P_2O_5(45), ZnO(34)$ $Al_2O_3(18), CaO(3)$	50	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	8.3kg	CRACK IN DIELECTRIC SUBSTANCE	CRACK IN PANEL
36*	PLASMA CVD METHOD	SiO_2	30	PLASMA CVD METHOD MGO WITH (100)-FACE ORIENTATION	THERMAL SPRAYING METHOD MULLITE ($3Al_2O_3 \cdot 2SiO_2$)	5.0kg	CRACK IN PANEL	—

* EXAMPLE NUMBER 9-12 FOR COMPARISON

United States Patent & Trademark Office

Office of Initial Patent Examination

Application papers not suitable for publication

SN 09964837 Mail Date 09/26/01

- ☐ Non-English Specification
- ☑ Specification contains drawing(s) on page(s)_____ or table(s) ~~Pages 56~~ 50 58
- ☐ Landscape orientation of text ☐ Specification ☐ Claims ☐ Abstract
- ☐ Handwritten ☐ Specification ☐ Claims ☐ Abstract
- ☐ More than one column ☐ Specification ☐ Claims ☐ Abstract
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- ☐ Claims not on separate page(s)
- ☐ Abstract not on separate page(s)
- ☐ Improper paper size -- Must be either A4 (21 cm x 29.7 cm) or 8-1/2"x 11"
  - ☐ Specification page(s)_____ ☐ Abstract
  - ☐ Drawing page(s)_____ ☐ Claim(s)
- ☐ Improper margins
  - ☐ Specification page(s)_____ ☐ Abstract
  - ☐ Drawing page(s)_____ ☐ Claim(s)
- ☐ Not reproducible Section
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  - ☐ Glossy pages ☐ Abstract
  - ☐ Non-white background ☐ Claim(s)
- ☐ Drawing objection(s)
  - ☐ Missing lead lines, drawing(s)_____
  - ☐ Line quality is too light, drawing(s)_____
  - ☐ More than 1 drawing and not numbered correctly
  - ☐ Non-English text, drawing(s)_____
  - ☐ Excessive text, drawing(s)_____
  - ☐ Photographs capable of illustration, drawing(s)_____